

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906**

ORDER NO. R3-2008-0069

**MASTER RECLAMATION REQUIREMENTS
FOR
THE CITY OF HOLLISTER
DOMESTIC WATER RECYCLING FACILITY
SAN BENITO COUNTY**

(Waste Discharger Identification No. 3 350100001)

The California Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board"), finds:

IMPORTANCE OF RECYCLED WATER

1. California Water Code Section 13510 states that the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.
2. California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water demands of the State.

FACILITY INFORMATION

3. The City of Hollister (hereafter "Discharger," "Supplier," "Distributor," or "Supplier and Distributor") owns and operates the wastewater collection, treatment, and disposal services for City of Hollister customers within their service area. The domestic wastewater treatment plant and recycled water treatment and distribution system (DWTP) are located at 2690 San Juan Hollister Road, Hollister, California in San Benito County, approximately two miles west of the City of Hollister. The facilities occupy San Benito County Assessor's Parcel Numbers (APNs) 52-10-1, -2, -3, -4, -5, -6, and APNs 18-11-37, -38, -39 within the southwest quarter of Township 12S, Range 5E, Mount Diablo base and meridian. See Attachment A for Vicinity and Site Map.
4. The Discharger submitted a *Report of Waste Discharge* on April 1, 2007 as an application for a Master Reclamation Requirements (MRR) permit. The *Report of Waste Discharge* proposes wastewater treatment, reclamation, and disposal improvements that will provide for water recycling. Specifically, the Discharger proposes to upgrade the DWTP from a 2.69 million gallons per day (MGD) facultative and oxidation pond disposal system to a 5.0 MGD immersed membrane bioreactor (MBR) disinfected tertiary recycled water system. The new facilities at the DWTP include:
 - a. Grit removal with grit classifier
 - b. Fine screens with screening washer/compactor

- c. Screened wastewater flow split structure
- d. Biological process basins (anoxic, aeration and post-anoxic zones)
- e. Mixed liquor recirculation pump station
- f. MBR basins to house the membrane filters
- g. MBR permeate pumps
- h. Chlorine contact basins
- i. Plant water and effluent pump stations
- j. Process blower and membrane blower building
- k. Solids thickening and dewatering facility
- l. Solids stabilization basin (utilizing the existing Pond 1A)
- m. Chemical feed and storage building
- n. Operations building, including laboratory and maintenance shop
- o. Septage receiving station
- p. Odor control biofilter
- q. Plant drain pump station
- r. New electrical power service
- s. Standby power generators
- t. Plant access/security system
- u. Instrumentation and control system
- v. Recycled water distribution pump station
- w. Nine miles of distribution pipelines

INTENT OF THIS ORDER

- 5. California Water Code Section 13523.1 provides that the Water Board may issue a Master Reclamation Requirements permit (Order) to a supplier or distributor, or both, of reclaimed water.
- 6. Order No. R3-2008-0069 is intended to serve as a Master Reclamation Requirements permit that is consistent with California Water Code Section 13523.1.
- 7. Order No. R3-2008-0069 is intended to supersede Order No. 87-047, adopted by the Water Board on March 13, 1987.

BASIN PLAN

- 8. The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Water Board on November 19, 1989, and approved by the State Water Resources Control Board (State Water Board) on August 16, 1990. The Water Board approved amendments to the Basin Plan on February 11, 1994, and September 8, 1994. The Basin Plan incorporates

statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the Basin Plan.

9. The Basin Plan designates the existing and anticipated beneficial uses of groundwater in the vicinity of the land disposal discharge to include:
 - a. Municipal and Domestic Water Supply
 - b. Agricultural Water Supply
 - c. Industrial Process Supply, and
 - d. Industrial Service Supply.
10. The San Benito River is the closest surface water body to the DWTP facility and reuse areas. The Basin Plan designates existing and anticipated beneficial uses of the San Benito River along the reach adjacent to the DWTP facility and reuse areas that could be affected by the discharge to include:
 - a. Municipal and Domestic Supply
 - b. Agricultural Water Supply
 - c. Industrial Service Supply
 - d. Groundwater Recharge
 - e. Water Contact Recreation
 - f. Non-Contact Water Recreation
 - g. Wildlife Habitat
 - h. Warm Freshwater Habitat
 - i. Spawning, Reproduction, and/or Early Development
 - j. Freshwater Replenishment
 - k. Commercial and Sport Fishing.
11. This Order implements the Basin Plan's water quality objectives.

ANTI-DEGRADATION

12. Antidegradation: State Water Board Resolution No. 68-16 *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The discharges regulated by this Order are subject to waste discharge requirements that will result in best practicable treatment or control, the prevention of pollution and nuisance, and

maintenance of the highest water quality consistent with maximum benefit to the people of the State.

TOTAL MAXIMUM DAILY LOAD (TMDL)

13. The San Benito River and several of its tributaries are on the Clean Water Act Section 303(d) list as impaired due to elevated concentrations of sediment and fecal coliform. The US Environmental Protection Agency approved the Pajaro River (including San Benito River) Sediment TMDL on May 3, 2007. Water Board staff continue to develop waste load and load allocations for sources of fecal coliform entering the San Benito River, as well as other water bodies within the Pajaro River watershed. Waste discharges described in this Order may be modified to meet the allocations described in current and future TMDLs if the Water Board determines that discharges from the Discharger's DWTP facility are causing or contributing to water quality impairment.

STORMWATER

14. The DWTP facility discharges storm water flows directly to surface waters and has applied for a separate storm water discharge permit under the State Water Resources Control Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

COLLECTION SYSTEM

15. The Discharger's sanitary sewer collection system is regulated under a separate Waste Discharge Requirements Order, the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, Order No. 2006-0003-DWQ.

ENVIRONMENTAL REVIEW

16. The City of Hollister Council members certified a final Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code, Section 621000 et seq.) and the California Code of Regulations on October 31, 2006, for the City of Hollister's Domestic Wastewater System Improvements and the San Benito County Water District Recycled Water Project (SCH2006012149). The City of Hollister determined the DWTP facility upgrade will have significant adverse environmental effects and that all potentially significant adverse effects can be avoided through implementation of mitigation measures. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface water and groundwater will be implemented through this Order.
17. The City of Hollister Council members certified a final Supplemental Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code, Section 621000 et seq.) and the California Code of Regulations on April 7, 2008, for the City of Hollister's Reclaimed Water Irrigation Project (SCH2007021136). The City of Hollister determined the Reclaimed Water Irrigation Project will have no significant adverse environmental effects although implementation of mitigation measures were prescribed. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface water and groundwater will be implemented through this Order.

GENERAL FINDINGS

18. No discharge of waste to waters of the State creates a vested right to continue the discharge. All discharges of waste into waters of the State are privileges, not rights. A permit is

conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations) and requirements necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance. Compliance with this Order should ensure that water quality is protected.

19. On **XXXX XX, 2008**, the Water Board notified the Discharger and other interested parties of its intent to prescribe Supplier and Distributor MRR for the Discharger's DWTP facility and associated reuse areas, respectively. In addition, the Water Board provided the public with an opportunity for a public hearing and the opportunity to submit written comments.
20. The Water Board has consulted with the State of California Department of Public Health (DPH) and has incorporated the recommendations from the DPH regarding the regulation of this discharge into the Order. The requirements of this Order conform with and implement the water reclamation criteria of the DPH and California Code of Regulations, Title 22, Chapter 3 to protect the public health, safety, and welfare.
21. The Water Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings at a public meeting held December 5, 2008.
22. Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the adoption date of this Order, except that if the thirtieth day following the date of the order falls on a Saturday, Sunday, or state holiday, the petition must be received by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.
23. Requirements specified in this Order are intended to ensure proper treatment and handling of recycled domestic wastewater for the protection of public health and does not pose a significant threat to surface water or underlying groundwater resources.

IT IS HEREBY ORDERED, pursuant to authority in Sections 13263 and 13523.1 of the California Water Code, that the City of Hollister, its agents, successors, and assigns, may produce, store and distribute reclaimed wastewater provided it complies with the following:¹

Footnotes are listed throughout these requirements to indicate the source of requirements specified. Numbered footnotes generally reference code sections for direct citations. Footnote acronyms are as follows:

¹ General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984, included as part of this Order.

BPJ	Best Professional Judgment of Regional Water Quality Control Board Staff
ROWD	City of Hollister Report of Waste Discharge, March 2007
40CFR	Title 40 Code of Federal Regulations
BP	Central Coast Regional Water Quality Control Plan
DPH	California Department of Public Health
T22	Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria
CWC	Porter-Cologne Water Quality Control Act (California Water Code)

The Discharger shall comply with all Prohibitions, Specification, and Provisions as applicable, and shall ensure that indirect Users also comply with these requirements. The Supplier and Distributor shall comply with the specific Supplier Requirements and Distributor/User Requirements, respectively. The Distributor shall ensure that indirect Users also comply with applicable Distributor/User Requirements.

A. PROHIBITIONS

1. Discharge of treated wastewater to areas other than disposal areas, or areas of authorized storage and use, is prohibited. ^{ROWD, BPJ}
2. Discharge of untreated or partially treated wastes to areas other than to waste disposal; including overflows, bypasses, seepages, and spills; is prohibited. ^{BPJ, PC}
3. Discharge of treated wastewater within 50-feet of all active or inactive water supply wells is prohibited. ^{DPH}
4. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in section 13050(m) of the California Water Code. ^{CWC}
5. Hourly flow rates through the DWTP treatment system surpassing the capacity of the chlorine contact basin or online membrane train is prohibited.
6. Recycled water used for irrigation is prohibited during periods of rainfall or when soils are saturated such that ponding or runoff occurs. ^{BPJ}
7. Recycled water applied at such a rate and volume which will exceed vegetative demand or soil moisture conditions is prohibited. ^{DPH}
8. Recycled water shall not be discharged from the treatment facilities, storage ponds, or other containment, other than for designated irrigation or other approved reuse applications in accordance with this Order. ^{BPJ}
9. There shall be no cross-connections between the potable water supply and pipes containing recycled water. Supplementing recycled water with water used for domestic supply shall not be allowed except through an air-gap separation which complies with the requirements of Section 7602(a) and 7603(b) of Title 17, California Code of Regulations (CCR). ^{DPH}

10. In accordance with CCR Title 17, Section 7605, a reduced pressure principle backflow device shall be provided at premises where recycled water is used and there is no interconnection with the potable water system.^{2, BPJ, T22, DPH}
11. Transportation of undisinfected recycled water within a pipeline used to transport Title 22 compliant recycled water is prohibited.^{DPH}
12. Use of disinfected recycled water for direct human consumption or for processing of food or drink intended for human consumption is prohibited.^{DPH}
13. Disposal of disinfected tertiary treated wastewater diverted to the Industrial Wastewater Treatment Plant (IWTP) disposal ponds is prohibited beyond December 31, 2015.^{ROWD, BPJ}

B. SPECIFICATIONS

Flow and General Limitations

1. Monthly average influent wastewater flow to the DWTP shall not exceed 4.0 MGD until purchase and installation of additional membrane units. Upon purchase and installation of additional membrane units and written authorization from the Executive Officer, 30-day average daily flow may be increased to, but may not exceed 5.0 MGD.^{ROWD, BPJ, DPH}
2. Monthly average treated wastewater flow to the DWTP percolation basins shall not exceed 2.38 MGD.^{ROWD, BPJ}
3. The effluent pH shall not be less than 6.5 or greater than 8.4.^{BP}
4. Monthly average diverted flow of disinfected tertiary treated wastewater to the IWTP percolation basins shall not exceed the flows as stated below in the following time schedule:
^{ROWD, BPJ}

Table 1 : Total Allowed Discharge to IWTP

Time Frame	Allowed Diversion to the IWTP (MGD)
2008 through 2010	up to 2.6 MGD
2010 through 2011	up to 2.0 MGD
2011 through 2012	up to 1.5 MGD
2012 through 2013	up to 1.0 MGD
2013 through 2014	up to 0.50 MGD
2014 through 2015	up to 0.25 MGD
After 2015	0 MGD

² This requirement does not apply to individual residences using recycled water for landscape irrigation as part of an approved dual plumbed use area as defined in CCR Title 17, Table 1 Section (c)(3).

5. Through January 2015, the DWTP effluent shall not exceed the following effluent limitations:

Table 2 : Effluent^a Limitations Through January 2015

Parameter	Daily Maximum (mg/L)^b	Monthly Average (mg/L)	Annual Average (mg/L)
BOD ₅	20	--	10
Total Suspended Solids	0.20	--	0.10
Ammonia, as N	7.0	--	5.0
Nitrate as N	7.0	--	5.0
Total Dissolved Solids	--	1,200	--
Sodium	--	250	--
Chloride	--	240	--
Boron	--	1.0	--
Sulfate	--	250	--

Note:

- a. As measured after disinfection and prior to the effluent disposal ponds or distribution.
- b. mg/L = milligrams per liter

6. After January 2015, the DWTP effluent shall not exceed the following effluent limitations:

Table 2 : Effluent^a Limitations After January 2015

Parameter	Daily Maximum (mg/L)	Monthly Average (mg/L)	Annual Average (mg/L)
BOD ₅	20	--	10
Total Suspended Solids	0.20	--	0.10
Ammonia, as N	7.0	--	5.0
Nitrate as N	7.0	--	5.0
Total Dissolved Solids	--	700	--
Sodium	--	200	--
Chloride	--	150	--
Boron	--	1.0	--
Sulfate	--	250	--

Notes:

- a. As measured after disinfection and prior to the effluent disposal ponds or distribution.

Disinfected Tertiary Recycled Water Limitations

7. The Supplier shall ensure that treated effluent put to use for disinfected tertiary recycled water applications shall be an adequately oxidized, filtered, and disinfected water, as defined in CCR Title 22, Division 4, Chapter 3, Sections 60301-60335, or alternatively defined and approved by DPH.

8. The turbidity of the disinfected tertiary recycled water shall not exceed any of the following:^{3, 4, 5}
 - a. An average of 0.2 nephelometric turbidity units (NTU) within a 24-hour period;
 - b. 0.2 NTU more than 5 percent of the time within a 24-hour period; and
 - c. 0.5 NTU at any time.
9. Disinfected tertiary recycled water shall not contain total coliform concentrations exceeding the following limits:⁶
 - a. the seven-day median concentration must not exceed an Most Probable Number (MPN) of 2.2 per 100 milliliters (ml); and
 - b. concentrations must not exceed an MPN of 23 per 100 ml in more than one sample taken over a 30-day period;
 - c. concentrations must be less than an MPN of 240 per 100 ml at all times.
10. The chlorine residual within the disinfection process following filtration shall provide a CT value⁷ of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow.

C. SUPPLIER AND DISTRIBUTOR REQUIREMENTS

1. The Supplier and Distributor must submit to, and obtain approval from the DPH and the Water Board, the plan for the recycled water distribution system from the DWTP to the use areas prior to initial delivery of recycled water. The plan should show the final and as-built drawings and maps of the locations of the potable water, sewer, and recycled water pipelines. The drawings should indicate adequate separation between the recycled water and potable domestic water lines that should be marked clearly or labeled using separate colors for identification.
2. The DPH, accompanied by Water Board staff, will conduct a site visit of the Discharger's DWTP, to inspect, evaluate and verify the operation of all alarms, setpoints, and failsafe procedures associated with the tertiary recycled water treatment facilities prior to start-up.
3. Reclamation facilities shall be operated in conformance with the California Department of Public Health "Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment," "Guidelines for Worker Protection at Reclamation Use Areas," the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*, and the Distributor's approved reclaimed water use rules and regulations (which may clarify and/or modify the above guidelines) and the appropriate local administrative procedures.

³ CCR Title 22, Div. 4, Chap.3, Section 60301.320

⁴ Pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes.

⁵ Pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.320(b) for filtration via microfiltration, ultrafiltration, nanofiltration, or reverse osmosis the effluent turbidity shall not exceed 0.2 NTU more than 5 percent of the time within a 24-hour period, and 0.5 NTU at any time.

⁶ CCR Title 22, Div. 4, Chap.3, Section 60301.230

⁷ The product of total chlorine residual and modal contact time measured at the same point.

4. Personnel involved in producing, transporting, or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water. ^{T22, BPJ}
5. Personnel involved in inspecting, maintaining or operating any distribution system equipment for recycled water shall be informed of the possible health hazards that may result from contact and use of recycled water. ^{T22, BPJ}
6. Delivery of recycled water shall cease during any period the DWTP fails to produce "disinfected tertiary recycled water" meeting CCR Title 22 criteria. The delivery of recycled water shall not be resumed until all conditions which caused the limits to be violated have been corrected and effluent in the storage ponds is suitable for disinfected tertiary recycled water applications. ^{BPJ}
7. All recycled effluent storage reservoirs and use areas with public access shall post (in English and Spanish) signage to warn the public recycled wastewater is being stored or used. ^{BPJ}
8. Recycled water systems shall be properly labeled and regularly inspected to ensure proper operation, absence of leaks, and absence of illegal connections. ^{BPJ, T22}
9. Recycled effluent storage ponds and wastewater ponds shall have sufficient freeboard, no less than two feet⁸ (measured vertically, from the water surface up to the point on the surrounding berm or dike having the lowest elevation and not including engineered outlet structures) at all times and shall be designed and constructed to prevent overtopping as a result of windy storm conditions. To determine pond freeboard, the Discharger shall install and maintain permanent markers with calibration indicating the water level at design capacity and available operational freeboard ^{BPJ}
10. The Supplier and Distributor shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Supplier, Distributor or Users to achieve compliance with this Order.
11. The Supplier and Distributor shall implement, and ensure that Users implement, annual employee training to ensure proper operation of reclamation facilities, worker protection, and compliance with this Order.
12. The Supplier and Distributor shall ensure that all above-ground equipment, including pumps, piping, storage reservoir, and valves, etc., under their respective control which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs. The Supplier and Distributor shall make all necessary provisions to inform the public that the water being stored or distributed is reclaimed municipal wastewater and is unfit for human consumption. The Supplier and Distributor shall ensure that each User complies with these requirements for all above-ground equipment under a User's control.
13. The DWTP shall be managed so as to minimize mosquito-breeding habitat. ^{BPJ}

⁸ Lesser freeboard, no less than one foot, is acceptable for below grade impoundments, and may be approved by the Executive Officer for above ground impoundments if documented by a registered civil engineer that structural integrity and required capacity will not be compromised with the proposed freeboard.

Alarms⁹

14. Alarm devices required for various unit processes as specified in other sections of this MRR shall be installed to provide warning of:
- a. Loss of power from the normal power supply.
 - b. Failure of a biological treatment process.
 - c. Failure of a disinfection process.
 - d. Failure of an ultrafiltration process.
 - e. Any other specific process failure for which warning is required by DPH or the Water Board.

All required alarm devices shall be independent of the normal power supply of the DWTP.

15. The person to be warned shall be the plant operator, superintendent, or any other responsible person designated by the management of the reclamation plant and capable of taking prompt corrective action.
16. Individual alarm devices may be connected to a master alarm to sound at a location where it can be conveniently observed by the attendant. In case the reclamation plant is not attended full time, the alarm(s) shall be connected to sound at a police station, fire station or other full-time service unit with which arrangements have been made to alert the person in charge at times that the reclamation plant is unattended.

Power Supply¹⁰

17. The power supply shall be provided with one of the following reliability features:
- a. Alarm and standby power source.
 - b. Alarm and automatically actuated short-term retention or disposal provisions as specified in Title 22 Section 60341.
 - c. Automatically actuated long-term storage or disposal provisions as specified in Title 22 Section 60341.

Flexibility of Design¹¹

18. The design of process piping, equipment arrangement, and unit structures in the reclamation plant must allow for efficiency and convenience in operation and maintenance and provide flexibility of operation to permit the highest possible degree of treatment to be obtained under varying circumstances.

Personnel¹²

19. Each reclamation plant shall be provided with a sufficient number of qualified personnel to operate the facility effectively so as to achieve the required level of treatment at all times.
20. Qualified personnel shall be those meeting requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

⁹ CCR Title 22, Div. 4, Chap. 3, Section 60335

¹⁰ CCR Title 22, Div. 4, Chap. 3, Section 60337

¹¹ CCR Title 22, Div. 4, Chap. 3, Section 60333

¹² CCR Title 22, Div. 4, Chap. 3, Section 60325

Maintenance¹³

21. A preventive maintenance program shall be provided at each reclamation plant to ensure that all equipment is kept in a reliable operating condition.
22. Flow meters and other process instrumentation will be calibrated in accordance with manufactures' recommendations and best management practices for the industry.

Operating Records and Reports¹⁴

23. Operating records shall be maintained at the reclamation plant or a central depository within the operating agency. These shall include: all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; all corrective or preventive action taken.
24. Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.
25. A monthly summary of operating records as specified in these requirements shall be filed monthly with the Water Board.¹⁵
26. Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to Water Board staff, the DPH, and the local environmental health officer at the numbers provided in the Monitoring and Reporting Requirements No. R3-2008-0069.

Bypass¹⁶

27. There shall be no bypass of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the point of use.

Off-Specification Effluent Contingency Plan

28. In the event effluent discharged to the effluent storage ponds does not meet the criteria for disinfected recycled water, the Supplier shall implement the Off-Specification Contingency Plan.^{17, ROWD}
29. The Off-Specification Contingency Plan shall be reviewed and updated annually as necessary. A copy of the revised Off-Specification Contingency Plan or statement indicating the Plan has been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring report.^{BPJ}
30. Alternative reuse methods for off-specification effluent may be implemented on an as needed basis if they meet the criteria for the "Uses of Recycled Water" contained in CCR

¹³ CCR Title 22, Div. 4, Chap. 3, Section 60327

¹⁴ CCR Title 22, Div. 4, Chap. 3, Section 60329

¹⁵ Per CCR Title 22 Div. 4, Chap. 3, Section 60301.740. "Regulatory agency" means the California Regional Water Quality Control Board(s) that have jurisdiction over the recycling plant and use areas.

¹⁶ CCR Title 22, Div. 4, Chap. 3, Section 60331

¹⁷ August 2005, RMC, Proposed Pond #1 Monitoring Plan

Title 22, Division. 4, Chapter 3, Article 3 (Sections 60303-60309) and prior approval is given by the Water Board and DPH. ^{BPJ}

Sludge and Solid Waste

(Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.)

31. Sludge and solid waste shall be removed from treatment facilities as needed to ensure optimal DWTP operation.
32. Treatment and storage of sludge shall be confined on-site and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations (see below).
33. Any storage of residual sludge and solid waste shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
34. Sludge and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid Waste Discharge Requirements issued by the Water Board will satisfy this specification.
35. Use of biosolids as a soil amendment shall comply with valid Waste Discharge Requirements issued by the Water Board. In most cases, this will mean the General Biosolids Order (SWRCB Water Quality Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
36. Use and disposal of biosolids should comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations (CFR), Part 503, which are subject to enforcement by the U.S. Environmental Protection Agency not the Water Board. If during the life of this Order the State accepts primacy for implementation of 40 CFR 503, the Water Board may also initiate enforcement where appropriate.

General Requirements

37. Extraneous surface drainage shall be excluded from the DWTP disposal and storage ponds. ^{BPJ}
38. Best management practices shall be implemented to minimize the inflow and infiltration of storm water and/or unauthorized wastewater into the DWTP. ^{BPJ}

39. All storm water contacting raw domestic wastewater or disinfected tertiary recycled water shall be contained and managed as raw domestic wastewater. ^{BPJ}
40. The Supplier shall provide weekly irrigation reports to the Distributor and Users documenting DWTP influent flows, User irrigation flows (including DWTP irrigation flows reported separately), and the amount of recycled effluent in storage and remaining storage capacity. ^{BPJ}

D. USER REQUIREMENTS¹⁸

1. The application of disinfected tertiary recycled water is limited to the following areas pursuant to Title 22, Division 4, Chapter 3, Section 60304 of the California Code of Regulations:
 - a. Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop,
 - b. Parks and playgrounds,
 - c. School yards,
 - d. Residential landscaping,
 - e. Unrestricted access golf courses,¹⁹ and
 - f. Any other irrigation use not specified in Section 60304 (Title 22) and not prohibited by other sections of the California Code of Regulations, or within these requirements.
2. The Supplier and Distributor may add additional use areas/Users for the application of disinfected tertiary treated wastewater as long as they meet all applicable requirements contained within this Order and the California Code of Regulations.
3. No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:
 - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
 - b. The well contains an annular seal that extends from the surface into the aquitard.
 - c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
 - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.
 - e. The owner of the well approves of the elimination of the buffer zone requirement.
4. No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.
5. Any use of recycled water shall comply with the following:
 - a. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the Water Board.

¹⁸ CCR Title 22, Div. 4, Chap. 3, Section 60310

¹⁹ For golf course use, the scorecards must clearly state that reclaimed water is used for irrigation. ^{BPJ}

- b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
6. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
7. Spray irrigation of recycled water shall be accomplished at a time and in a manner to minimize ponding and the possibility of public contact with sprayed materials.^{BPJ}
8. No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.
9. All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A of CCR Title 22, Section 60310. The Water Board may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Water Board that the alternative approach will assure an equivalent degree of public notification.
10. Except as allowed under section 7604 of title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
11. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.
12. The Distributor shall ensure that backflow prevention devices are in proper working order by testing initially and annually thereafter, in accordance with CCR Title 18, Section 7605. Reports of testing and maintenance shall be maintained by the Distributor.

Design Requirements

13. The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.²⁰
14. All pipes installed above or below the ground, on and after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape.²¹
15. The Distributor shall implement a Cross Connection Control Plan²² to protect the public water supply system. The Cross Connection Plan shall be reviewed and updated annually as

²⁰ CCR Title 22, Div. 4, Chap. 3, Section 60315

²¹ California Health & Safety Code Section 116815

necessary. A copy of the revised Cross Connection Control Plan or statement indicating the Cross Connection Control Plan has been reviewed, but not updated shall be submitted to the Water Board as part of the Distributor's annual monitoring report. ^{ROWD, BPJ}

Nutrient Management Plan

16. Hydraulic and nutrient loading rates for the application of disinfected tertiary recycled water shall be based on food crop, vegetation or landscaping consumption and tolerance and shall not exceed what is reasonable for production of the food crops, vegetation or landscaping (i.e., recycled water shall be applied in an amount that will not cause nitrogen within the root zone to exceed the agronomic demand for nitrogen and result in the leaching of nitrate to groundwater). ^{BPJ}
17. The Supplier and Distributor shall prepare and implement a Nutrient Management Plan (NMP) for the application of recycled water to protect the beneficial uses of groundwater. The NMP shall account for all nutrient loading to the application areas and ensure that the total amount of nitrogen applied does not exceed the amount of nitrogen required by the food crops, vegetation or landscaping being irrigated.
18. As part of the NMP, the Supplier and Distributor shall submit an annual report documenting allowable and actual nitrogen loading to the recycled water application areas. The report shall include, at a minimum:
 - a. Analysis of the contributing sources of nutrients being applied to the recycled water application areas;
 - b. Analysis of annual nitrogen loading to the basin and individual application areas from each contributing source;
 - c. Analysis of the allowable nutrient and hydraulic loading (based on limiting nitrogen loading) of recycled water based on characteristic effluent data for nitrogen, other contributing nitrogen sources, and the nutritive requirements of the application areas;
 - d. Comparison of the actual and allowable annual nitrogen loading rates;
 - e. Analysis of groundwater monitoring data for nitrogen constituents;
 - f. Evaluation of potential impacts of nutrient loading on the groundwater basin;
 - g. Evaluation of potential nutrient reduction measures; and,
 - h. Recommendations and time schedules for the implementation of measures addressing excessive nitrogen loading (i.e. actual loading greater than allowable loading) as applicable.
19. **Annual NMP reports are due January 31st of each year** and may be included as part of the annual monitoring report. **The first annual NMP report is due January 31, 2010.** The NMP shall be reviewed and updated annually thereafter as necessary. A copy of the revised NMP or statement indicating the NMP has been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring reports.
20. Additional annual NMP reports will not be required upon request by the Supplier and Distributor and approval by the Executive Officer given the following conditions are met:

²² August 2005, RMC, Engineering Report for Production, Distribution, and use of Recycled Water, Appendix E – Las Palmas Ranch Cross Connection Control Plan

- a. The initial nitrogen loading evaluation indicates the application of recycled water at appropriate hydraulic rates along with other nitrogen sources will not exceed the nutritive requirements of the food crops, vegetation or landscaping being irrigated;
- b. Recycled water is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;
- c. A NMP is implemented for the controlled application of fertilizers by landscaping contractors maintaining the application areas; and,
- d. Effluent nitrogen concentrations from the DWTP regularly meet or are less than the effluent limitations of this Order and are stable.

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the loading evaluation.)

21. Discharges that exceed the hydraulic loading rate based on the nutritive requirements of the receiving vegetation may be allowable on a case-by-case basis upon request by the Distributor and approval by the Executive Officer given the following conditions are met:

- a. The nitrogen loading evaluation indicates the land application of wastewater at appropriate hydraulic rates (based on soil permeability) will not exceed the nutritive requirements of the vegetation being irrigated by more than a total nitrogen concentration as determined by the following equation²³:

$$\Delta N = (TOC - 5) / 2$$

TOC = effluent Total Organic Carbon

- b. Wastewater is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;
- c. Effluent nitrogen concentrations from the DWTP regularly meet or are less than the effluent limitations of this Order and are stable; and,
- d. The Discharger provides an assimilative capacity analysis and nitrogen balance showing that the additional nutrient loading to the groundwater basin will not cause or contribute to exceedances of water quality objectives for nitrate in groundwater

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the assimilative capacity analysis and nitrogen balance.)

Long Term Salinity Management Program

22. The Supplier and Distributor shall implement the Long Term Salinity Management Program (LTSMP) to document salt loading and evaluate and implement measures for the reduction of salt loading as the result of the application of recycled water as outlined in the March 2007 ROWD. Salt reduction measures shall focus on all potential salt contributions from the water supply, and residential, commercial and industrial uses as applicable prior to disposal. The Supplier and Distributor shall evaluate limiting or prohibiting domestic water softeners and conditioners under California Health and Safety Code Section 116786 and shall adopt an ordinance under Section 116786 as appropriate and feasible to reduce salt loading from the

²³ Maximum of nitrogen that can be effectively denitrified during rapid infiltration under optimum operating conditions; Metcalf and Eddy, Third Ed., 1991, page 972.

domestic use of water softeners. The LTSMP will map out milestones in order to achieve an effluent TDS concentration of 700 mg/L by the year 2015.

23. As part of the LTSMP, the Supplier and Distributor shall submit an annual report documenting salt loading and salt reduction efforts. This report shall include, at a minimum:
- Analysis of annual salt (TDS, sodium, chloride, sulfate, and boron) loading to the basin and individual application areas;
 - Analysis of the contributing sources of salt mass in the recycled water (including the evaporative concentration of salts within the effluent storage ponds);
 - Analysis of groundwater monitoring data for salt constituents;
 - Evaluation of potential impacts of salt loading on the groundwater basin;
 - Evaluation of potential salt reduction measures including a water softener ordinance;
 - Summary of existing salt reduction measures and their impact; and,
 - Recommendations and time schedules for implementation of proposed salt reduction measures.

Annual SMP reports are due January 31st of each year and may be included as part of the annual monitoring report. **The first annual SMP report is due January 31, 2010.**

Groundwater Limitations

24. The discharge shall not cause the pH of underlying groundwater to exceed 8.3 or recede below 6.5.^{BP}
25. The use or disposal of treated wastewater shall not cause the median concentration of coliform organisms in groundwater over any seven-day period to be more than 2.2 MPN per 100 ml.^{BP, BPJ}
26. The use or disposal of treated wastewater shall not cause a statistically significant increase of mineral or organic constituent concentrations in underlying groundwater, as determined by statistical analysis of samples collected from wells in the vicinity of the disposal area.^{BP, BPJ}
27. The use or disposal of treated wastewater shall not cause nitrate concentrations in affected groundwater to exceed 8 mg/l (as N) and shall not cause a statistically significant increase of nitrate concentrations in underlying groundwater.^{24, BPJ, BP}
28. The use or disposal of treated wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.^{BP}
29. To protect the *municipal and domestic supply* beneficial uses of groundwater underlying the use or disposal areas, the application of treated wastewater shall not cause groundwater to:
- Exceed the Primary Maximum Contaminant Levels for organic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.

²⁴ The evaluation of this requirement will consider pre-existing conditions based on available characteristic groundwater quality data in the vicinity of the use areas.

- b. Exceed the Primary Maximum Contaminant Levels for inorganic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.
 - c. Exceed the levels for radionuclides set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443.
30. The use or disposal of treated wastewater shall not cause radionuclides to be present in groundwater in concentrations that are deleterious to human, plant, animal, or aquatic life, or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.^{BP}

Individual Recycled Water Use Permits

31. The Supplier and Distributor shall enforce rules and regulations for recycled water users governing the design, construction and maintenance of recycled water use facilities and the use of recycled water, in accordance with the uniform statewide reclamation criteria established pursuant to California Water Code Section 13521.²⁵ The Supplier and Distributor shall also develop administrative procedures specifying how the recycled water rules and regulations and permit-based system for regulating users will be implemented. **The implementation procedures shall be submitted to the Department of Public Health and Central Coast Water Board by June 31, 2009, for review and approval.** The rules and regulations shall be reviewed and updated annually thereafter as necessary. A copy of the revised rules and regulations or statement indicating they have been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring reports.
32. The Supplier and Distributor shall require each User to (i) designate a Reclaimed Water Site Supervisor responsible for compliance with permit conditions and answerable to the Supplier and Distributor²⁶, and (ii) immediately notify the Supplier and Distributor of changes in the Reclaimed Water Site Supervisor and provide documentation that the new supervisor has received training.
33. Recycled Water Use permits, issued by the Supplier and Distributor in accordance with the approved rules and regulations, form the basis of permitted recycled water use by specific Users. Recycled Water Use permits shall specify self-monitoring and reporting requirements for each User, and require compliance with all applicable requirements of this Order. The Distributor must provide a copy of the Recycled Water Use permit and this Order to the Users. Recycled Water Use permits shall require Users to have these available at all times for inspection by Water Board staff, the Distributor, or State/County Health Officers.
34. If someone other than the User is responsible for applying the recycled water (i.e. secondary distributor like a truck hauler) then the Supplier and Distributor shall inform the secondary distributor of these requirements in a written permit or other suitable manner. In addition, the secondary distributor shall fill out a Recycled Water Release Form when receiving reclaimed water from the Supplier and Distributor. The secondary distributors must carry the Recycled Water Release Form at all times.

²⁵ CWC Section 13523.1(b)(3)

²⁶ CCR Title 17, Division 1, Chapter 5, Group 4, Article 1, Section 7586

E. PROVISIONS

1. Order No. R3-2008-0069 supersedes Order No. 87-47 for all uses specified by that Order. Order No. 87-47 is hereby rescinded.
2. The Supplier and Distributor shall comply with all applicable requirements of Monitoring and Reporting Program No. R3-2008-0069 as adopted by the Water Board and as may be amended by the Executive Officer. The Supplier and Distributor shall be responsible for collecting necessary data and reports from the Users. The Supplier and Distributor shall require Users to appoint and train a Reclaimed Water Supervisor and to submit on-site observation reports and use data to the Supplier and Distributor, who will compile and file self-monitoring reports with the Water Board. The Supplier and Distributor, at its discretion, may appoint and train the Users' Reclaimed Water Supervisors and collect on-site observation reports and use data.
3. The Producer shall conduct a tracer study under four different flow rates (the maximum, the minimum, and two points in between) to determine the respective modal contact times for the chlorine contact basins when they are operated simultaneously in parallel. A second tracer study will be conducted with only one basin in service, and will be representative of either basin operated singly. A final report of the tracer study will be submitted to the DPH and Water Board within 30 days after the completion of the studies and prior to the initial delivery of recycled water to each use site.
4. The Supplier and Distributor shall develop a Groundwater Monitoring Plan capable of determining the impact of treated wastewater and recycled water upon underlying groundwaters. **The Groundwater Monitoring Plan shall be submitted to the DPH and Water Board by January 31, 2010, for review and approval.**
5. The Supplier shall be responsible for ensuring and documenting that reclaimed water meets the quality standards of this Order. The Distributor shall be responsible for regulating the design, construction, maintenance and operation of recycled water transport facilities, application areas and associated appurtenances owned and operated by the Users and for ensuring that Users meet all water application, operations and maintenance requirements of this Order. The Distributor shall conduct periodic inspections of User facilities and conduct monitoring and reporting to document compliance with the conditions of the Users' permits and this Order.
6. The Supplier, Distributor, and Users shall permit the Water Board staff or its authorized representative in accordance with California Water code section 13267(c):
 - Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order,
 - Access to and copy of any records that must be kept under conditions of this Order,
 - Inspection of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order,
 - To photograph, sample, and monitor for the purpose of assuring compliance with this Order.

7. Prior to the initial delivery of recycled water to each use site, the Producer shall submit piping plans for that site to DPH for approval.
8. For any extension or expansion of the recycled water system or use areas not covered by the Title 22 report, the Producer shall submit to DPH an addendum to the Title 22 report for approval.
9. Upon Executive Officer approval, additional flow may be allowed at the DWTP facility.
10. The Supplier and Distributor shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984. The Water Board will revise this Order periodically and may revise these requirements when necessary.
11. Pursuant to CCR Title 23, Division 3, Chapter 9, , the Discharger must submit a written report to the Executive Officer not later than January 31, 2013, addressing:
 - a. Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
 - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

I, ROGER W. BRIGGS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on December 5, 2008.

Ordered By:

Executive Officer

CRD

126-01

Paper File: City of Hollister

Electronic File: S:\WDR\WDR Facilities\San Benito Co\City of Hollister\MRR R3-2008-0069\Draft Order\MASTER WRR R3-2008-0069.doc